AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Currently Amended) A method of managing a logical allocation of resources between connection-oriented traffic and connectionless traffic being routed through a shared physical network element of a communications network, the method comprising the steps of:

   a) determining a resource requirement of the connection-oriented traffic; ~~and~~

   b) dynamically adjusting a respective ~~connectionless~~ traffic metric to be used for routing connectionless traffic based on the determined resource requirement of the connection-oriented traffic~~,~~; and

   c) routing the connectionless traffic based on the ~~connectionless~~ adjusted traffic metric,

   thereby providing the logical allocation of resources for connectionless traffic based on the resource requirement of connection-oriented traffic.

2. (Original) A method as claimed in claim 1, wherein the connection-oriented traffic comprises multi-protocol label switched (MPLS) traffic.

3. (Original) A method as claimed in claim 2, wherein the step of determining the resource requirement of the connection-oriented traffic comprises the steps of:

   a) receiving MPLS reservation requests in respect of the shared physical network element; and

   b) dynamically adjusting a total amount of resources required to satisfy the received MPLS reservation requests.

4. (Original) A method as claimed in claim 1, wherein the connectionless traffic comprises internet protocol (IP) packet traffic.

5. (Original) A method as claimed in claim 4, wherein routing of the connectionless traffic is controlled using an interior gateway protocol (IGP) routing system adapted to calculate a shortest path route of the connectionless traffic through the communications network, the shortest path routing being based on a respective metric of each physical network element forming the network.

6. (Original) A method as claimed in claim 5, wherein the step of dynamically adjusting the respective metric comprises the steps of:

a) increasing the respective metric as the determined resource requirement of the connection-oriented traffic increases; and

b) decreasing the respective metric as the determined resource requirement of the connection-oriented traffic decreases.

7. (Original) A method as claimed in claim 5, wherein the respective metric is a link distance vector associated with a respective link connected to a node of the communications network.

8. (Original) A method as claimed in claim 7, wherein the step of dynamically adjusting the respective metric comprises the steps of:

a) determining an updated value of the link distance vector; and

b) updating a mapping table maintained by the node with the updated value of the link distance vector.

9. (Original) A method as claimed in claim 8, wherein the step of determining an updated value of the link distance vector comprises a step of querying a resource allocation table comprising a plurality of characteristic resource allocation values

and a respective link distance vector value corresponding to each characteristic resource allocation value.

10. (Original) A method as claimed in claim 9, wherein the step of querying the resource allocation table comprises the steps of:

a) identifying the characteristic resource allocation value which most closely matches the determined resource requirement of the connection-oriented traffic; and

b) selecting the corresponding link distance vector as the updated link cost factor.

11. (Original) A method as claimed in claim 5, wherein the respective metric is a link cost factor associated with a respective link connected to a node of the communications network.

12. (Previously Presented) A method as claimed in claim 10, wherein the step of dynamically adjusting the respective metric comprises the steps of:

a) determining an updated value of the link cost factor;

b) updating a PATH table maintained by the node with the updated link cost factor value; and

c) propagating a link state packet containing the updated link cost factor value to neighboring nodes within the network.

13. (Original) A method as claimed in claim 12, wherein the step of determining an updated value of the link cost factor comprises a step of querying a resource allocation table comprising a plurality of characteristic resource allocation values and a respective link cost factor value corresponding to each characteristic resource allocation value.

14. (Original) A method as claimed in claim 13, wherein the step of querying the resource allocation table comprises the steps of:

a) identifying the characteristic resource allocation value which most closely matches the determined resource requirement of the connection-oriented traffic; and

b) selecting the corresponding link cost factor as the updated link cost factor.

15. (Currently Amended) A shared network element operative within a communications network capable of end-to-end transport of connection-oriented traffic and connectionless traffic through the shared network element, the shared network element comprising:

a) means for determining a resource requirement of the connection-oriented traffic; and

b) means for dynamically adjusting a respective ~~connectionless~~ traffic metric to be used for routing connectionless traffic based on the determined resource requirement of the connection-oriented traffic;; and

c) means for routing the connectionless traffic through the shared network element based on the ~~connectionless~~ adjusted traffic metric,

thereby providing a logical allocation of resources for connectionless traffic based on the resource requirement of connection-oriented traffic.

16. (Original) A shared network element as claimed in claim 15, wherein the connection-oriented traffic comprises multi-protocol label switched (MPLS) traffic.

17. (Original) A shared network element as claimed in claim 16, wherein the means for determining the resource requirement of the connection-oriented traffic comprises:

a) means for receiving MPLS reservation requests in respect of the shared physical network element; and

b) means for dynamically adjusting a total amount of resources required to satisfy the received MPLS reservation requests.

18. (Original) A shared network element as claimed in claim 15, wherein the connectionless traffic comprises internet protocol (IP) packet traffic.

19. (Original) A shared network element as claimed in claim 18, wherein routing of the connectionless traffic is controlled using an interior gateway protocol (IGP) routing system adapted to calculate a shortest path route of the connectionless traffic through the communications network, the shortest path routing being based on a respective metric of each physical network element forming the network.

20. (Original) A shared network element as claimed in claim 19, wherein the means for dynamically adjusting the respective metric comprises means adapted to:

a) increase the respective metric as the determined resource requirement of the connection-oriented traffic increases; and

b) decrease the respective metric as the determined resource requirement of the connection-oriented traffic decreases.

21. (Original) A shared network element as claimed in claim 19, wherein the respective metric is a link distance vector associated with a respective link connected to a node of the communications network.

22. (Original) A shared network element as claimed in claim 21, wherein the means for dynamically adjusting the respective metric comprises:

a) means for determining an updated value of the link distance vector; and

b) means for updating a mapping table maintained by the shared network element with the updated value of the link distance vector.

23. (Original) A shared network element as claimed in claim 22, wherein the means for determining an updated value of the link distance vector comprises a resource allocation table comprising a plurality of characteristic resource allocation values and a respective link distance vector value corresponding to each characteristic resource allocation value.

24. (Original) A shared network element as claimed in claim 23, further comprising:

a) means for identifying the characteristic resource allocation value which most closely matches the determined resource requirement of the connection-oriented traffic; and

b) means for selecting the corresponding link distance vector as the updated link cost factor.

25. (Original) A shared network element as claimed in claim 19, wherein the respective metric is a link cost factor associated with a respective link connected to a node of the communications network.

26. (Previously Presented) A shared network element as claimed in claim 25, wherein the means for dynamically adjusting the respective metric comprises:

a) means for determining an updated value of the link cost factor;

b) means for updating a PATH table maintained by the node with the updated link cost factor value; and

c) means for propagating a link state packet containing the updated link cost factor value to neighboring nodes within the network.

27. (Original) A shared network element as claimed in claim 26, wherein the means for determining an updated value of the link cost factor comprises a resource allocation table comprising a plurality of characteristic resource allocation values and a

respective link cost factor value corresponding to each characteristic resource allocation value.

28. (Original) A shared network element as claimed in claim 27, further comprising:

a) means for identifying the characteristic resource allocation value which most closely matches the determined resource requirement of the connection-oriented traffic; and

b) means for selecting the corresponding link cost factor as the updated link cost factor.

29. (Currently Amended) A method of managing a logical allocation of resources between connection-oriented traffic and connectionless traffic being routed through a shared physical network element of a communications network, the method comprising the steps of:

a) in response to a change in resources allocated to a multi-protocol label switched (MPLS) path through the shared physical network element, determining an updated total amount of resources of the shared physical network element allocated to connection-oriented traffic; ~~and~~

b) dynamically adjusting a respective updated ~~connectionless~~ traffic metric of the shared physical network element based on the updated total resources allocated to the connection-oriented traffic; and

c) routing the connectionless traffic based on the ~~connectionless~~ adjusted traffic metric.

30. (Currently Amended) A shared network element operative within a communications network capable of end-to-end transport of connection-oriented traffic and connectionless traffic through the shared network element, the shared network element comprising:

a) means responsive to a change in resources allocated to a multi-protocol label switched (MPLS) path through the shared physical network element for determining an updated total amount of resources of the shared physical network element allocated to connection-oriented traffic; ~~and~~

b) means for determining an updated ~~connectionless~~ traffic metric to be used for routing connectionless traffic based on the updated total resources allocated to the connection-oriented traffic.; and

c) means for routing the connectionless traffic based on the ~~connectionless~~ adjusted traffic metric.